

SU 0828471
NOV 1983

RK 838, 471

84-105239/17 E14 J04 (E12) AUPH= 19.07.78
AS UKR PHYS ORG CHEM (LENI)
19.07.78-SU-646587 (30.11.83) B01j-31/02 B01j-37
Catalyst for phenol alkylation - comprises metal phenoxyde bonded
to hydroxylated surface of solid carrier

E(10-E28) J(4-E4) N(5-A)

1328

Dwg. No. 0/0

CS4-044911

The metal phenoxyde catalyst is prep'd. by successive work-up of hydroxylated solid inorganic carried with the metal chloride vapour and then with inert gas and phenol vapour. The metal chlorides used are chlorides of ammonia, iron, chromium, titanium, zirconium, vanadium or rhodium. The catalyst activity is 40-70%.

The process includes hydroxylation of the carrier surface, treatment of the carrier with metal halide, removal of physically absorbed halide and work-up with phenol vapour. In an example, SiO₂ carrier undergoes a process affording a prod. contg. 1 Al atom per 1 phenol mole. Repeating the stages yields a prod. contg. for 1 surface Al atom 2 phenol moles e.g. as in formula (II). Phenol alkylation with dodecene-1 at 160 deg. C in the presence of the aluminium phenoxyde catalyst bonded to a solid carrier, taken in 20 mass %, yields 40.9-70.0 mass % of orthododecyl phenol. The aluminium catalyst is more active than the liquid phenoxyde or the solid phenoxydes of Fe, Cr or Zr, which only yield 5-14% of the orthoalkylphenol. Bul.44/30.11.83. (5pp

